Use Pesticides Properly

- Identify the problem before using pesticides. The Chesterfield County Extension Office can help you properly identify pests, including insects, diseases and weeds.
- Use pesticides only if necessary, and always use the least-toxic product available.
- Plan ahead to eliminate or reduce storage and disposal problems, and purchase pesticides in formulations with minimal packaging, if possible.
- Avoid applying pesticides prior to a rain event to reduce runoff.
- Always read the label completely before applying pesticides, and FOLLOW ALL LABEL DIRECTIONS.
- Mix only the amount needed to do the job at hand. Follow the label's instructions for application method and safety measures. Note specific warnings and precautions – they are there for your protection!
- Never spray near water or when there is wind. Pesticides can drift directly into streams or drainage ditches, polluting waterways. Pesticides can also drift into unintended areas, damaging desirable plants.
- Never pour pesticides down the sink or into storm drains. Unused pesticides may be dropped off at designated areas at the county's solid-waste transfer stations for proper disposal.

Broadleaf Weed Control

- Most broadleaf weeds are controlled well with weed-control products with a combination of active ingredients (e.g. 2,4-D, dicamba, MCPP, etc.)
- Use a liquid formulation and treat the entire lawn.
- Timing is crucial. Control winter broadleaf weeds in October and November and summer broadleaf weeds in April and May.

Crabgrass Control

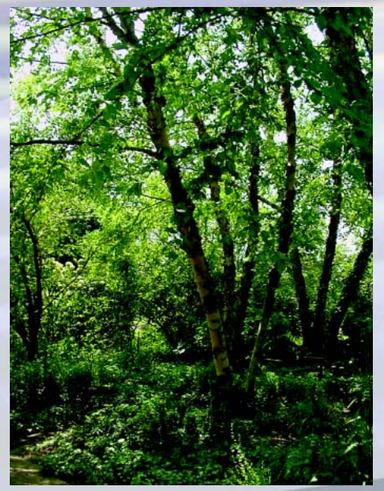
- Choose pre-emergence crabgrass herbicides that do not contain fertilizer.
- Treat in March-April. Buy enough for 2 applications.
- If needed, apply a post-emergence control in June.

Disease and Insect Control

- Generally, fungicides are not necessary in home turf. Strong turf will outgrow most disease problems.
- White grubs and sod webworms may damage lawns. If you have a problem, contact your Extension Office for identification and current control recommendations.

'BayScaping' Using Native Plants

Landscaping with native plants is called "BayScaping." BayScaping improves water quality and the environment. Native plants are hardy because they have adapted to the local conditions. Once established, native plants do not need pesticides, fertilizers or watering. Not only is this good for the environment, but it also saves time and money. BayScaping brings a taste of wilderness to developed areas by attracting a variety of birds, butterflies and other animals. Gardeners, residents and visitors enjoy a variety of colors, shapes and seasonal beauties of plants used in BayScapes.



Riparian Buffers

Riparian buffers are the corridors of environmentally sensitive land that lie alongside or near the shorelines of streams, rivers and lakes. Riparian buffers perform a variety of important biological and ecological functions, such as providing food and habitat for wildlife. In their natural conditions, riparian buffers protect water quality by:

- Filtering pollutants out of storm-water runoff;
- Reducing the volume of storm-water runoff;
- Preventing erosion.

A riparian buffer also is referred to as a resource protection area (RPA) and is protected in Chesterfield County by the Chesapeake Bay Preservation Ordinance passed in 1990. If you are lucky enough to live on a reservoir, or have a stream in your backyard, protect your RPA. For more information about what activities are permitted, or guidance on restoring vegetation in a RPA, contact the Office of Water Quality for assistance.

For More Information

Visit the Chesterfield County Extension Office Web page, at www.chesterfield.gov/extension (select "Clean Lakes" from the left-hand menu).

Virginia Cooperative Extension, Chesterfield County Office
751-4401

Chesterfield County Office of Water Quality
748-1035

Friends of Chesterfield's Riverfront
796-1703

To report an illicit discharge:
Chesterfield County Office of Water Quality
24 Hour Hot Line
717-6161

DEQ
Virginia Department of Environmental Quality
Virginia Coastal Program

NOAA
National Oceanic and Atmospheric Administration
U.S. Department of Commerce

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Virginia Cooperative Extension
Knowledge for the CommonWealth
Virginia Tech
Virginia Polytechnic Institute and State University
Virginia State University

Chesterfield County Virginia

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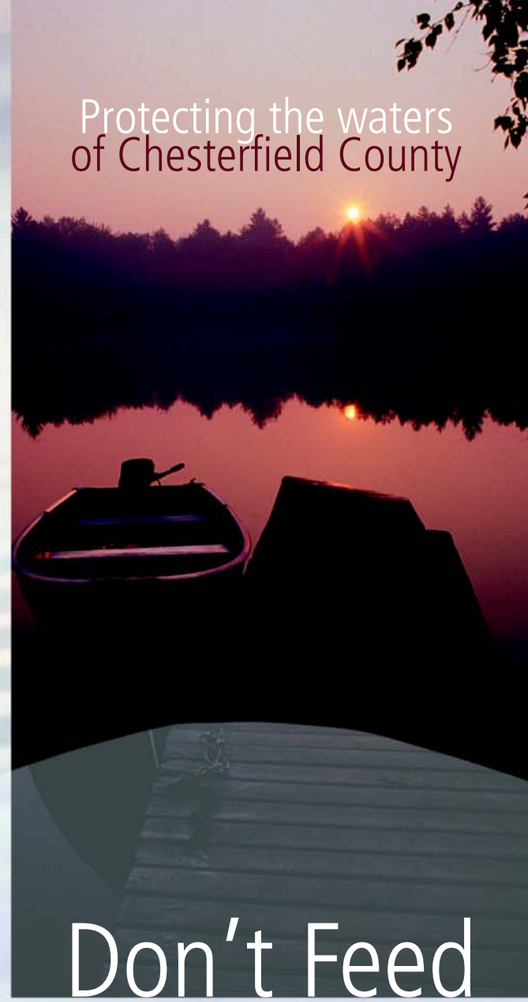
CHESTERFIELD COUNTY
Providing a FIRST CHOICE community through excellence in public service

Protecting the waters of Chesterfield County



Don't Feed the Lake

Chesterfield County is fortunate to have nearly 1,300 miles of streams, 124 miles of riverfront, and hundreds of acres of reservoirs, ponds and lakes. From the smallest creek to the largest lake, these water bodies contribute to the quality of life in the county. Residents may not realize that many of their behaviors and daily activities impact these waters. Practices such as improper fertilization, over use of pesticides and failing to protect soil can lead to algal blooms and fish kills, causing long-term problems for waterways. Conducting proper landscape maintenance practices and maintaining a naturally vegetated buffer adjacent to lakes and streams can significantly reduce such pollution.

Key Steps to Cool-Season Turfgrass Maintenance

Cool-season grasses such as fescues, bluegrasses and ryegrasses can benefit from the following:

Soil Test

- Soil test every two to three years to determine the pH and nutrient needs of your lawn.
- Soil test kits are available at all Chesterfield County public libraries. You also may have your soil tested at a local agricultural testing lab.
- Soil tests cost approximately $10 per sample.

Fertilizer

- Use a fertilizer that has approximately 4 parts nitrogen, 1 part phosphate and 2 parts potash. See the box below for examples.
- Those that contain slow-release nitrogen (SRN) or water-insoluble nitrogen (WIN) are excellent choices.
- Two or three applications should be made in the fall (September, October, November — SON).
- Avoid spring fertilization, which can lead to excessive blade growth at the cost of a good root system. Spring fertilization can also promote fungal diseases.
- Avoid applying fertilizers prior to a rain event to reduce runoff.

Analysis	Approximate lb./1000 sq. ft. per application
24-6-12	4
20-5-10	5
14-3-6	7

Lawn Size

- It is important to measure the size of the turf area. Use a 50-foot hose or measure your shoe length and walk off the area heel to toe to estimate lawn size.

Adjust pH

- The ideal soil pH range for grasses is 6.2 to 6.5. Adjust the pH by adding lime (to raise pH) or sulfur (to lower pH) according to your soil-test results.

Water

- Turfgrass needs at least 1 inch of water per week during the growing season.
- Use a rain gauge to determine if your lawn needs artificial irrigation.
- If you choose to water, water early in the day to reduce disease problems.
- Apply a 1/2 inch water every three to four days. Deep, infrequent watering promotes a healthy turf and deep grass roots. Avoid watering often and for short periods.
- To calculate how long you need to water, place several coffee cans under the spray and time how long it takes to accumulate a 1/2 inch of water in the cans.

Mowing

- Cut often so that no more than one-third of the leafage is removed per mowing.
- Mow to a height of 2 to 3 inches. Correct mowing heights promote a thick turf and deter weeds. See box below for example.
- It is not necessary to bag clippings. They will decompose quickly and return nitrogen to the soil. If you do bag, your clippings can be composted.

Turfgrass mowed at recommended heights will have deeper, stronger roots.

Close mowing

Proper mowing height

Core Aerate

- Core aerate your lawn yearly to improve soil structure, enhance infiltration of rain water, reduce compaction and improve rooting.

- Be sure to use a core aerator (one that removes soil plugs and deposits them on the lawn surface) and not a spike-type aerator, which increases soil compaction.

Overseed

- When overseeding an established lawn, 2 pounds of tall-fescue seed per 1,000 square feet is adequate to thicken the lawn.
- Overseed after core aerating between Aug. 15 and Oct. 15.

Build and Protect Soil

- Add organic matter to your soil to increase the speed with which water soaks into the ground and to improve soil drainage and the soil's ability to hold water.
- Leave grass clippings on the lawn and till leaves and compost into flower and vegetable beds.
- Mulch around trees and shrubs to reduce runoff. Mulch protects soil from being hit directly by rain, reducing soil crusting and increasing water penetration into the soil.
- Don't leave garden soil bare over the winter. Mulch or plant a cover crop, such as annual rye.